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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,781	04/07/2005	Adrian-Gelu Boborodea	ECLE59.010APC	9389
20995 7590 02/15/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER CHRISTENSEN, RYAN S	
			ART UNIT	PAPER NUMBER
			2856	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		02/15/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/15/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
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Office Action Summary

Application No.

10/530,781

Applicant(s)

BOBORODEA ET AL.

Examiner

Ryan Christensen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9 is/are rejected.
- 7) ☐ Claim(s) 10-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 8 is objected to because of the following informalities: There appears to be a typographical error, a quotation mark appears at the end of the claim. Please note the amended claims have underlined the quotation mark. In order to properly delete material it must be bracketed or crossed through. See MPEP 714 II C (B).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,800,706 (Fischer).
5. With respect to claim 1, Fischer discloses elastic wires (scaffolding, Col. 2, lines 20-33 and Col. 7, lines 26-31) as packing for a chromatography column

(chromatography media, Col. 11, lines 29-35) which has a length per diameter greater than 3, (Col. 7, lines 26-31).

6. Note that the recitation of "for use in an...sample solution" is considered to be an intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.
1. With respect to claim 2, Fischer discloses metallic fibers, which are known to have a Young's modulus greater than 50 Gpa.
2. With respect to claim 3, Fischer discloses metallic fibers, which are known to have a thermal conductivity higher than $0.1 \text{ Wcm}^{-1}\text{K}^{-1}$.
3. With respect to claim 4, Fischer discloses the scaffolding having a diameter of greater than 5 microns, which is less than 1mm, and a length preferably 200 times greater than the diameter, which results in a length approximately 2mm.
4. With respect to claim 5, Fischer discloses metallic fibers, glass polymeric or inorganic particles (Col. 7, lines 26-30 and Col. 7, lines 40-44).
5. With respect to claim 7, Fischer discloses the fiber being polymeric, metallic, or glass (Col. 7, lines 40-44).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,800,706 (Fischer).
9. With respect to claim 8, Fischer does not explicitly disclose the dimensions of a column for use with the packing. However, it would have been obvious to one of ordinary skill in the art at the time of the invention as a matter of routine experimentation to arrive at the claimed dimensions. See MPEP 2144.05.
10. Claims 1-3, 5, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over an article entitled "High Density Polyethylene Fraction with Supercritical Propane" (Britto et al.).
11. With respect to claim 1, Britto et al. disclose steel wire mesh used as packing (page 554 last paragraph) in TREF (page 554, right hand column). Britto et al. do not explicitly disclose the length per diameter of the wires being greater than three. However, it would have been obvious to one of ordinary skill in the art as a matter of routine experimentation to find these workable ranges because the courts have held that optimization of workable ranges not to be inventive. See MPEP 2144.05.
12. Note that the recitation of "for use in an...sample solution" is considered to be an intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to

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patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

13. With respect to claim 2, Britto et al., disclose stainless steel wire mesh as packing. The Young's modulus of steel is inherently greater than 50 Gpa (about 190 GPA).
14. With respect to claim 3, Britto et al. disclose stainless steel wire mesh as packing. Steel inherently has a thermal conductivity higher than $0.1 \text{ Wcm}^{-1}\text{K}^{-1}$ (about $0.5 \text{ Wcm}^{-1}\text{K}^{-1}$).
15. With respect to claim 5, Britto et al. disclose stainless steel wire mesh as packing (page 554).
16. With respect to claim 9, Britto et al. disclose a temperature controlling system (right hand column of page 555 discusses stepwise raising of the temperature to 160°C), a sample injector for injecting the polymer solution into the column (charged to the column, right hand column, page 555), a pump (compressor, Fig. 1), and a detector (a chromatograph for SEC and a for differential scanning calorimeter).

Pertinent Prior Art

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
18. U.S. Patent 4,798,081 (Hazlitt et al.) discloses a method and apparatus for ATREF of a crystalline or semi-crystalline polymer sample.

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19. U.S. Patent 5,030,713 (Wild et al.) discloses an improved process for ATREF.
20. U.S. Patent 6,780,314 (Jinno et al.) discloses a column packed with fibers which are about 1 mm in diameter and greater than 3 mm in length for use in chromatography.
21. U.S. Patent 3,492,794 (Reynolds et al.) discloses a column for chromatography where the column contains elastic wires. It further discloses that the size of the wires are determined by the wires are determined by one of skill in the art based on the column size and components being separated.

Allowable Subject Matter

22. Claims 10-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Christensen whose telephone number is 571-272-2683. The examiner can normally be reached on Monday - Friday, 8am - 5pm.
24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RC


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